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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/671,150	09/28/2000	Wataru Domon	017344/0312	8461
22428	7590	01/20/2004	EXAMINER	
FOLEY AND LARDNER			EUGENE, WANDA	
SUITE 500			ART UNIT	PAPER NUMBER
3000 K STREET NW			2666	
WASHINGTON, DC 20007			DATE MAILED: 01/20/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/671,150	DOMON ET AL.
Examiner	Art Unit	
Wanda Eugene	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 28 September 2000.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 15-17 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-4, 7, 18-19 and 21 is/are rejected.
- 7) Claim(s) 5,6,8-14 and 20 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) Interview Summary (PTO-413) Paper No(s). _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 220 and 12. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 616. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to because the specification refers to Figs. 9A to 9D, however, the drawings display only a Fig. 9. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 221 and 222. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

5. Claims 15 and 16 objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.
6. Claim 17 objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claim has not been further treated on the merits.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.
8. Claim 7 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The applicant refers to physical layers one; three, four and five, as to infer that there are five physical layers, when actuality there is four discussed within this claim.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

10. Claim 1-3, 18 and 19 rejected under 35 U.S.C. 102(a) as being anticipated by Saito (U.S. 6,509,988).

Regarding claims 1, 18 and 19, Saito discloses the claimed invention: a speed converter for converting the speed of packets (**physical layer interface having a speed setting circuit for setting the top speed of an IEEE serial bus node** col. 1 lines 51-53) transmitted between first and second communication nodes respectively attached to first and second IEEE-1394 serial buses, comprising: a first transceiver node for receiving an inbound first packet at a first speed from the first bus and transmitting an inbound second packet as an outbound second packet at the first speed to the first bus; a second transceiver node for transmitting said inbound first packet as an outbound first packet at a second speed to the second bus and receiving said inbound second packet at the second speed from the second bus (**port transceivers 10 and 11 operating with a target node over respective serial buses, are connected to a data link which performs data format conversion between the data strobe signals to and from port transceivers. A first speed setting circuit located in a first port transceiver of the plurality of port transceiver and a second speed setting circuit located in a second port transceiver** col. 2 lines 13-18 and col. 3 lines 7-15); header translation circuitry for translating destination identifier of said inbound first packet to destination identifier of said outbound first packet according to a mapped relationship between the first transceiver node and the second communication node, and translating destination identifier of said inbound second packet to destination identifier of said outbound second packet (**a compare-and- select circuit for comparing the operating speed set by the first speed setting circuit with the operating speed set by the second speed setting circuit** col. 2 lines 19-21).

Regarding claim 2, Saito discloses a first physical layer processor connected to said first bus; a first link layer processor connected to the first physical layer processor (**physical layer interface of an IEEE-1394 serial bus node comprising a plurality of port transceivers connected to a controller performing data conversions between the link layer and transceivers** col. 2 lines 4-13); and first speed setting means for setting a value representative of said first speed into said first link layer processor (**first speed setting circuit located in a first transceiver of a plurality of port transceivers** col. 2 lines 13-15), wherein said second transceiver node comprises: a second physical layer processor connected to said second bus; a second link layer processor connected to the second physical layer processor (**physical layer interface of an IEEE-1394 serial bus node comprising a plurality of port transceivers connected to a controller performing data conversions between the link layer and transceivers** col. 2 lines 4-13); and second speed setting means for setting a value representative of said second speed into said second link layer processor (**a second speed setting circuit located in a second port transceiver of the plurality of port transceivers** col. 2 lines 17-19), wherein said header translation circuitry comprises: a memory for storing identifiers for mapping said first transceiver node to said second communication node (**a register for storing operating parameters** col. 1 lines 63-64); and control circuitry connected to said first and second link layer processors for receiving a packet therefrom and rewriting destination identifier of the packet according to the identifiers stored in said memory when a transaction is initiated from said first bus (**a controller connected to the link layer and port transceivers arranged to read the stored speed value from the register, receive a speed value from another node and begin packet transmission** col. 2 lines 1-26)

Regarding claim 3, wherein said memory further stores identifiers for mapping said second transceiver node to said first communication node (**a register for storing operating**

parameters of the controller under the control of the link layer col. 3 lines 41-43), and wherein said control circuitry receives a packet from said second transceiver node and rewrites destination identifier of the packet according to the identifiers stored in said memory when a transaction is initiated from said second bus (**controller arranged to read the stored speed value from the register, performs arbitration between communicating nodes** col. 3 lines 9-12).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 4 and 21 rejected under 35 U.S.C. 103(a) as being unpatentable over Saito in view of Cook.

Saito discloses a speed converter for converting the speed of packets transmitted between a plurality of first communication nodes attached to a first IEEE-1394 serial bus and a plurality of second communication nodes attached to a second IEEE-1394 serial bus, comprising: at least one first repeater node (the multi port node is further provided with a **repeater 4**, fig 1; col. 3 line 28) connected to the first bus; a first transceiver node for receiving an inbound first asynchronous packet from the first bus at a first speed via said at least one firsts repeater node and transmitting an inbound second asynchronous packet as an outbound second asynchronous packet at the first speed to the first bus via said at least one first repeater node, the first transceiver node having identifiers identifying the first transceiver node itself and said at least one first repeater node at least one second repeater node (the multi port node is further

provided with a **repeater 4**, fig 1) connected to the second bus; a second transceiver node for transmitting said inbound first asynchronous packet as an outbound first asynchronous packet to the second bus at a second speed via at least one second repeater node and receiving the inbound second asynchronous packet from the second bus at the second speed via said at least one second repeater node, the second transceiver node having identifiers identifying the second transceiver node itself and said at least one second repeater node (**port transceivers 10 and 11 operating with a target node over respective serial buses, are connected to a data link which performs data format conversion between the data link signals to and from port transceivers via a repeater. A first speed setting circuit located in a first port transceiver of the plurality of port transceiver and a second speed setting circuit located in a second port transceiver col. 2 lines 13-18 and col. 3 lines 7-15**); except for header translation circuitry for translating destination identifier of said inbound first asynchronous packet received by the first transceiver node to destination identifier of said outbound first asynchronous packet according to mapped relationships between said second communication nodes and said first transceiver node and said at least one first repeater node, and translating destination identifier of said inbound second asynchronous packet received by the second transceiver node to destination identifier of said outbound second asynchronous packet according to mapped relationships between said first communication nodes and said second transceiver node and said at least one second repeater node. Cook teaches that it is known to include a system that determines if the source ID is the same as the destination ID and then through a series of processes of setting the ID's the same as set forth at col. 7 lines 53-67 and col. 8 lines 1-30. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a means of setting the source ID to the destination ID, as taught

by Cook in order to select a maximum data rate at which data can be transmitted between selected nodes on the high performance serial bus.

Allowable Subject Matter

13. Claims 5-6, 8-14 and 20 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

15. Kato et al. (U.S. 6,397,277) Method and apparatus for transmitting data over data bus at maximum speed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wanda Eugene whose telephone number is 703-305-8978. The examiner can normally be reached on M-F 7am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q Ngo can be reached on 703-305-4798. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-3900.

we


RICKY NGO
PRIMARY EXAMINER